IEP Tidal Wetland Monitoring PWT
Conceptual Model Subteam Meeting Notes
July 14, 2014

Participants: Bruce Herbold (contractor, DFW), Ted Sommer (DWR), Alice Low (DFW), Steve Culberson (USFWS), Anitra Pawley (DWR), Jenny Bigman (DSC), Hildie Spautz (DFW), Rosemary Hartman (DFW), Jim Hobbs (UC Davis), Jon Cook (UC Davis), Stacy Sherman (DFW), Louise Conrad (DWR), Dave Zezulak (DFW), Julie Garcia (DFW), Larry Brown (USGS), Adam Ballard (DFW), and Dave Contreras (DFW).

The focus of the meeting was looking at and updating DRERIP and other relevant conceptual models to guide tidal marsh monitoring efforts. The subteam was formed at the June 25 meeting of the IEP Tidal Wetland Monitoring PWT. The team organized the conceptual models as follows:

1st Tier – Delta Smelt, Salmon, Food Web, and Tidal Marsh
2nd Tier – Longfin Smelt
Constraint Models – Aquatic Vegetation, Invasive Clams, and Methyl Mercury

[Jenny and Rosemary agreed to talk to Chris Enright about developing a conceptual model for the evolution of a restored marsh. The team agreed that an evolution model was of low priority and was not needed in the next month.]

1st Tier Models

Delta Smelt – Ted Sommer summarized the MAST report, including delta smelt life history, habitat attributes and hypotheses. Ted selected out areas that may be affected by wetland restoration to create a conceptual model for wetland effects on delta smelt. The team liked the tiered structure of the MAST conceptual models by life stage; models the team develops may not be structured like the DRERIP models. [Note: electronic copies of Ted's presentation and handout were distributed to the subteam members via email from Adam Ballard on July 15 for their review and input.]

Salmon – Ted Sommer and his collegues will develop salmon fry and smolt conceptual models using an approach similar to that used for the Delta Smelt MAST conceptual model.

Food Web – Jim Hobbs will develop a food web conceptual model. He thinks that the current DRERIP food web model is too detailed for our purpose. The new model will include a flux of production from the marsh to surrounding areas and attraction of fish into restored sites. Predation and invasive clams will also be incorporated into the food web model.

Tidal Marsh – Rosemary Hartmann, Jennifer Bigman, Anitra Pawley, Hildie Spautz, and hopefully Chris Enright will update the tidal marsh conceptual model. Steve Culberson will update hydrodynamic interconnections (how marshes relate to one another).

2nd Tier Models

Longfin Smelt – There is little information on Longfin Smelt using tidal marsh habitat, however Lenny Grimaldo's recent work shows they are present.

Constraint Models

Aquatic Vegetation – Hildie Spautz and Louise Conrad will talk to Lars Anderson and update the aquatic vegetation model.

Invasive Clams – Will be part of the Food Web model. Larry Brown will help Jim Hobbs update the food web model.

Methyl Mercury – Mentioned, but not covered during the meeting.

The current expectation is that all conceptual models in tier 1 (and possibly the constraints models) will be updated by July 23, 2014. The models will be shared with the conceptual model subteam for edits/comments. The next meeting of the subteam will be June 23, 9:00 – 12:00 at the DFW Fisheries Branch conference room (830 S Street, Sacramento). The updated models will then be shared at the next Tidal Wetland Project Work Team on July 30, 2014.